

No.

200300281

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Board of Regents, University of Nebraska

Whereas THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR PLANT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED, (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (34 STAT.

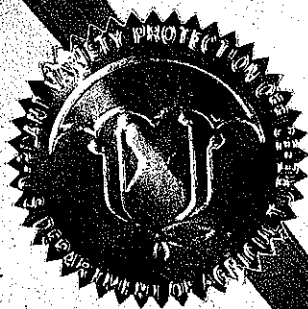
1542, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Goodstreak'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-eighth day of January, in the year two thousand and four.

Attest:



Commissioner
Plant Variety Protection Office
Agriculture

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
Instructions and information collection burden statement on reverse)

NAME OF OWNER Board of Regents, University of Nebraska		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME NE97465	3. VARIETY NAME Goodstreak
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Lincoln, NE 68583-0745		5. TELEPHONE (include area code) 402-472-7211	FOR OFFICIAL USE ONLY <div style="border: 1px solid black; padding: 5px; font-size: 1.2em; font-weight: bold;"> INFO NUMBER 200300281 </div> FILING DATE <div style="font-size: 1.2em;"> July 8, 2003 </div>
		6. FAX (include area code) 402-472-7904	
IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation	8. IF INCORPORATED, GIVE STATE OF INCORPORATION Nebraska	9. DATE OF INCORPORATION February 15, 1869	
NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Dr. Darrell W. Nelson, Dean and Director Agricultural Research Division, IANR-UNL Lincoln, NE 68583-0704			FILING AND EXAMINATION FEES: ① 2705.00 ② 947.00 ③ May 21, 2003 DATE July 29, 2003 CERTIFICATION FEE: \$ 432.00 DATE 1/16/2004
11. TELEPHONE (include area code) 402-472-2045	12. FAX (include area code) 402-472-9071	13. E-MAIL DNELSONL@unl.edu	14. CROP KIND (Common Name) Bread Wheat
5. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) - a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input checked="" type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "no," go to item 22)	
		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
		21. DOES THE OWNER SPECIFY THAT THE CLASSES BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1, 2, 3, etc. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER 		SIGNATURE OF OWNER 	
NAME (Please print or type) Darrell W. Nelson		NAME (Please print or type) Darrell W. Nelson	
CAPACITY OR TITLE Dean, Ag Research Division	DATE 4/26/03	CAPACITY OR TITLE Dean, Ag Research Division	DATE 4/26/03

2003-00281
GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

RECEIVED
USDA-AMS-PVPO

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvp.htm>

ITEM

'03 MAY 21 P4:46

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
- (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
- (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
21. See Section 83 of the Act for the Contents and Term of Plant Variety Protection.
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

September 2003 - First sale of certified seed

September 2002 - First allocation of foundation seed of unrelated cultivar with intent to increase for public sale

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0035). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Cent at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (2-99), designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (6-98) which is obsolete.

Goodstreak (PI 632434) Hard Red Winter Wheat Application

Exhibit A. Origin and Breeding History

Goodstreak was selected from the cross 'SD3055/KS88H164//NE89646 that was made in 1991. The pedigree of SD3055 is ND604/SD2971, where ND604 is 'Len'/'Butte'/ND526 and SD2971 is 'Agent'/3/'ND441'/'Waldron'/'Bluebird'/4/Butte/5/Len. The pedigree of KS88H164 is 'Dular'/'Eagle'//2*'Cheney'/'Larned' /3/'TAM107'. The pedigree of NE89646 is 'Colt' *2/'Patrizanka'. The F₁ to F₃ generations were advanced using the bulk breeding method. Goodstreak is an F₃-derived line that was selected in the F₄ generation. The F₁ generation was grown in the greenhouse in 1991-92. The F₂ and F₃ generations were grown in bulk at the Agricultural Research and Development Center at Ithaca, Nebraska in 1993 and 1994, respectively. Random heads were chosen from the F₃ bulk and planted as head rows which were harvested in 1995. The F₃-derived F₅ family was harvested as a single observation plot in 1996.

Goodstreak was identified as NE97465 and was grown at six unreplicated locations in 1997. It has been tested in replicated trials at six to seven locations per year from 1998 to present. In addition, Goodstreak was tested as NE97465 in Nebraska yield nurseries starting in 2001 and in the Southern Regional Performance Nursery in 2000 and 2001, and in Nebraska cultivar performance trials in 2001 and 2002. The criteria for selection were: a) adequate winterhardiness for propagation in Nebraska, b) resistance to *Puccinia graminis* (the causal agent of stem rust), c) agronomic performance equal to or superior to commonly grown wheat varieties, and d) acceptable end-use quality (in this case for bread making). Goodstreak was released primarily for its superior adaptation to rainfed wheat production systems in western Nebraska and Eastern Wyoming where conventional height wheat cultivars with long coleoptiles are needed for good emergence and harvest in low moisture conditions. Goodstreak was named and officially released in January, 2003 by the Nebraska Agricultural Experiment Station, the Wyoming Agricultural Experiment Station, and the Agricultural Research Service, U.S. Department of Agriculture. The first public sale of Certified seed will be in September, 2003.

Goodstreak will be maintained by the Nebraska Agricultural Experiment Station with the following classes: Breeder, Foundation, Registered, and Certified. By agreement with the Nebraska Crop Improvement Certification standards, Registered seed is nonsalable. Breeder seed will be maintained by roguing Breeder Seed fields. The Wyoming Agricultural Experiment Station and the U.S. Department of Agriculture will not have seed for distribution.

Goodstreak has been uniform and stable since 2000. Less than 0.5 % of the plants were rogued from the Breeder's seed increase in 2000. The rogued variant plants were taller in height (7 - 15 cm) or were awnless with red chaff. Up to 1% (10:1000) variant plants may be encountered in subsequent generations.

Exhibit B. Novelty Statement

To our knowledge, Goodstreak most nearly resembles in appearance the hard red winter wheat cultivar, Buckskin, but can be distinguished by the following characteristics:

1. Buckskin carries a defeated stem rust resistance gene (*Sr17*) and is no longer resistant to

the common races of stem rust. Goodstreak carries stem rust resistance gene *Sr6* (and most likely *Sr24*; data provided by Dr. Don McVey, USDA-ARS, Cereal Disease Laboratory) and is resistant to the common races of stem rust.

2. Buckskin was named because at maturity its straw and awns are similar to a "buckskin" horse, specifically, the straw is tan and the awns can turn dark to near black. At maturity, Goodstreak is a bright straw and chaff cultivar, specifically, cream colored straw and cream colored awns.
3. The glume shoulder of Buckskin is oblique, whereas the glume shoulder of Goodstreak is elevated to square.

Exhibit C. See Attached Sheet.

Exhibit D. Additional Description of the Variety.

Goodstreak is an awned, white-glumed cultivar. Its field appearance is most similar to Buckskin. After heading, the canopy is moderately closed and upright. The flag leaf is erect and twisted at the boot stage. The foliage is light green to yellow green with a light waxy bloom at anthesis. The leaves are glabrous. The spike is tapering in shape, narrow, and midlong. The glume is glabrous, midlong and narrow, and the glume shoulder is midwide to wide and oblique. The beak is medium in length with an acuminate tip. The spike is usually inclined to nodding at maturity. Kernels are red colored, hard textured, short to midlong, and elliptical in shape. The kernel has no collar, a large brush of medium length, rounded cheeks, large germ, and a narrow and shallow crease.

The average Nebraska rainfed yield of Goodstreak of 3280 kg ha⁻¹ (28 environments) was less than the grain yields of 'Millennium' (3440 kg ha⁻¹), 'Wahoo' (3430 kg ha⁻¹) and 'Alliance' (3380 kg ha⁻¹), but greater than 'Culver' (3230 kg ha⁻¹), 'Wesley' (3160 kg ha⁻¹), and Arapahoe (3180 kg ha⁻¹). In western NE and WY (12 environments), Goodstreak (2690 kg ha⁻¹) was similar in yield to Pronghorn (2710 kg ha⁻¹) and superior to Buckskin (2500 kg ha⁻¹). Goodstreak, Pronghorn, and Buckskin are conventional height wheat cultivars. In the Southern Regional Performance Nursery, Goodstreak ranked 38th of 45 entries in 2000 (32 environments) and 15th of 43 entries in 2001 (32 environments) and averaged 40 kg ha⁻¹ less grain yield than TAM 107. Goodstreak has not performed well under irrigation and is not recommended for use in irrigated production systems.

Goodstreak is medium in maturity (142 d after Jan. 1, data from observations in NE), about 1 d earlier flowering than Buckskin and 1.5 d later flowering than Pronghorn. Goodstreak has a long coleoptile (62 mm), as expected for a conventional height wheat cultivar, and is similar in length to Pronghorn (64 mm) and slightly shorter than Buckskin (70 mm), but longer than semi-dwarf wheat cultivars such as Arapahoe (45 mm), and Millennium (44 mm). The mature plant height of Goodstreak (94 cm) is 7 cm taller than Millennium and 21 cm taller than Wesley. Goodstreak has good straw strength (9% lodged), which is better than Arapahoe (25% lodged), but lower than Wesley (2% lodged). The winter hardiness of Goodstreak is good to very good, and comparable to other winter wheat cultivars adapted and commonly grown in Nebraska.

Goodstreak is moderately resistant to stem rust (caused by *Puccinia graminis* Pers.: Pers. f. *sp. tritici* Eriks & E. Henn; most likely containing *Sr6* and an unknown gene; data provided by D.

McVey at the USDA Cereal Disease Laboratory), and Hessian fly (*Mayetiola destructor* Say, superior to Arapahoe, data provided by J. Hatchett and Ming-Shun Chen, USDA and Kansas State University). Goodstreak is susceptible to leaf rust (caused by *P. triticina* Eriks.; may contain an unknown gene; data provided by D. McVey at the USDA Cereal Disease Laboratory), wheat soilborne mosaic virus, wheat streak mosaic virus, and barley yellow dwarf virus (data obtained from the Uniform Winter Wheat Southern Regional Performance Nursery, 2000-2001 and field observations in NE).

Goodstreak has good grain volume weight (76.7 kg hl^{-1}), which is similar to Pronghorn and Millennium, and is superior to Arapahoe (75.0 kg hl^{-1}) and Wesley (74.8 kg hl^{-1}). The milling and baking properties of Goodstreak were determined for five years by the Nebraska Wheat Quality Laboratory. In these tests, Arapahoe was used as a check cultivar. The average protein content of the grain and flour of Goodstreak (137 and 118 g kg^{-1}) was lower than Arapahoe (143 and 131 g kg^{-1}). In the low rainfed environments of western NE and WY the average grain protein content of Goodstreak (135 g kg^{-1}) was higher than Pronghorn (130 g kg^{-1}) and Buckskin (130 g kg^{-1}). The average flour extraction on the Buhler Laboratory Mill for Goodstreak (708 g kg^{-1}) was similar to Arapahoe (712 g kg^{-1}). The flour ash content (43 g kg^{-1}) was similar to Arapahoe (43 g kg^{-1}). Dough mixing properties of Goodstreak are acceptable, but weaker than Arapahoe. Average baking absorption was slightly better than Arapahoe. The average loaf volume of Goodstreak (912 cm^3) was less than Arapahoe (937 cm^3). The scores for the internal crumb grain and texture were good, which was similar to Arapahoe. The overall end-use quality characteristics for Goodstreak should be acceptable to the milling and baking industries.

In positioning Goodstreak, it has performed extremely well throughout most of Nebraska but is best adapted to low rainfed wheat production systems where conventional height wheat cultivars are grown. Goodstreak should be a good replacement for Buckskin in Nebraska and Wyoming. Both are conventional height cultivars, but Goodstreak has a higher yield potential, similar straw strength, and superior disease and insect resistances. Goodstreak is genetically complementary to '2137', Alliance, Buckskin, Culver, 'Jagger', Millennium, 'Niobrara', Pronghorn, 'Vista', and 'Windstar'.

Exhibit E. Statement of the Basis of the Applicant's Ownership

The University of Nebraska is the applicant for protection in the case of Goodstreak hard red winter wheat being the variety for which Plant Variety Protection is hereby sought was developed by Drs. P.S. Baenziger and B. Beecher, employees of the University of Nebraska and C. J. Peterson and R. A. Graybosch, employees of the USDA-ARS. By agreement between employees of the University of Nebraska and by agreement between USDA-ARS and the University of Nebraska, all rights to any variety made by employees while employed by the University of Nebraska or by the USDA-ARS employees stationed at the University of Nebraska are assigned to the University of Nebraska, with no rights of any kind to Goodstreak being retained by the employees. Goodstreak was co-released by the Wyoming Agricultural Experiment Station on the basis of its performance in Wyoming, but no ownership rights are given to the as part of the co-release procedure to employees of or to the Wyoming Agricultural Experiment Station.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S) Board of Regents, University of Nebraska	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or RD No., City, State, and Zip Code) Lincoln, NE 68583-0745	PVPO NUMBER 2003 00 281
	VARIETY NAME Goodstreak
	TEMPORARY OR EXPERIMENTAL DESIGNATION NE97465

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: Please answer all questions for your variety; lack of response may delay progress of your application.

- KIND:

<input type="text" value="1"/>	1=Common	2=Durum	3=Club	4=Other (SPECIFY):
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- VERNALIZATION:

<input type="text" value="2"/>	1=Spring	2=Winter	3=Other (SPECIFY):
--------------------------------	----------	----------	--------------------
- COLEOPTILE ANTHOCYANIN:

<input type="text" value="1"/>	1=Absent	2=Present
--------------------------------	----------	-----------
- JUVENILE PLANT GROWTH:

<input type="text" value="1"/>	1=Prostrate	2=Semi-erect	3=Erect
--------------------------------	-------------	--------------	---------
- PLANT COLOR (boot stage):

<input type="text" value="1"/>	1 = Yellow-Green	2 = Green	3 = Blue-Green
--------------------------------	------------------	-----------	----------------
- FLAG LEAF (boot stage):

<input type="text" value="1"/>	1 = Erect	2 = Recurved	<input type="text" value="2"/>	1 = Not Twisted	2 = Twisted
--------------------------------	-----------	--------------	--------------------------------	-----------------	-------------
- EAR EMERGENCE:

<input type="text" value="0"/> <input type="text" value="1"/>	Number of Days Earlier Than <u>Buckskin</u>	*
<input type="text" value="0"/> <input type="text" value="2"/>	Number of Days Later Than <u>Pronghorn</u>	*

8. ANTHOR COLOR:

200300281

1 = Yellow

2 = Purple

9. PLANT HEIGHT (from soil to top of head, excluding awns):

cm Taller Than Millennium *cm Shorter Than Buckskin *

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

10. STEM:

A. ANTHOCYANIN

1 = Absent

2 = Present

B. WAXY BLOOM

1 = Absent

2 = Present

C. HAIRINESS (last internode of rachis)

1 = Absent

2 = Present

D. INTERNODE (SPECIFY NUMBER)

1 = Hollow

2 = Semi-solid

3 = Solid

E. PEDUNCLE

1 = Absent

2 = Present

cm Length

11. HEAD (at Maturity):

A. DENSITY

1 = Lax

2 = Middense

3 = Dense

B. SHAPE

1 = Tapering

2 = Strap

3 = Clavate 4 = Other (SPECIFY): _____

C. CURVATURE

1 = Erect

2 = Inclined

3 = Recurved

D. AWNEDNESS

1 = Awnless

2 = Apically Awnletted

3 = Awnletted 4 = Awned

12. GLUMES (at Maturity):

A. COLOR

1 = White

2 = Tan

3 = Other (SPECIFY): _____

C. BEAK

1 = Obtuse

2 = Acute

3 = Acuminate

B. SHOULDER

1 = Wanting

2 = Oblique

3 = Rounded

4 = Square

5 = Elevated

6 = Apiculate

D. LENGTH

1 = Short

2 = Medium

(ca. 7mm)

(ca. 8mm)

3 = Long (ca. 9mm)

E. WIDTH

☐ 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm)
☐ 3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE

☐ 3 = 1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK

☐ 1 = Rounded 2 = Angular

C. BRUSH

☐ 1 = Short 2 = Medium 3 = Long

☐ 1 = Not Collared 2 = Collared

D. CREASE

☐ 1 = Width 60% or less of Kernel
 2 = Width 80% or less of Kernel
 3 = Width Nearly as Wide as Kernel

☐ 1 = Depth 20% or less of Kernel
 2 = Depth 35% or less of Kernel
 3 = Depth 50% or less of Kernel

E. Color

☐ 3 = 1 = White 2 = Amber 3 = Red
 4 = OTHER (Specify)

G. PHENOL REACTION (see instructions):

☐ 1 = Ivory 2 = Fawn
 3 = Light Brown 4 = Dark Brown
 5 = Black

F. TEXTURE

☐ 1 = Hard 2 = Soft

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

☐ 2 = Stem Rust (*Puccinia graminis* f. sp. *tritici*)
 (Field Races)

☐ 4 = Stripe Rust (*Puccinia striiformis*)
 (Field Races)

☐ 0 = Tan Spot (*Pyrenophora tritici-repentis*)

☐ 0 = Halo Spot (*Selenophoma donacis*)

☐ 0 = *Septoria nodorum* (Glume Blotch)

☐ 0 = *Septoria avenae* (Speckled Leaf Disease)

☐ 0 = *Septoria tritici* (Speckled Leaf Blotch)

☐ 1 = Scab (*Fusarium* spp.)
 (Field Races)

☐ 1 = Leaf Rust (*Puccinia recondita* f. sp. *tritici*)

☐ 0 = Loose Smut (*Ustilago tritici*)

☐ 0 = Flag Smut (*Urocystis agropyri*)

☐ 0 = Common Bunt (*Tilletia tritici* or *T. laevis*)

☐ 0 = Dwarf Bunt (*Tilletia controversa*)

☐ 0 = Karnal Bunt (*Tilletia indica*)

☐ 0 = Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)

☐ 0 = "Snow Molds"

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

- | | |
|---|---|
| <input type="checkbox"/> 0 "Black Point" (Kernel Smudge) | <input type="checkbox"/> 0 Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.) |
| <input type="checkbox"/> 1 Barley Yellow Dwarf Virus (BYDV) (Field Races) | <input type="checkbox"/> 0 Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>) |
| <input type="checkbox"/> 1 Soilborne Mosaic Virus (SBMV) | <input type="checkbox"/> 0 Black Chaff (<i>Xanthomonas campestris</i> pv. <i>translucens</i>) |
| <input type="checkbox"/> 0 Wheat Yellow (Spindle Streak) Mosaic Virus | <input type="checkbox"/> 0 Bacterial Leaf Blight (<i>Pseudomonas syringae</i> pv. <i>syringae</i>) |
| <input type="checkbox"/> 1 Wheat Streak Mosaic Virus (WSMV) (field Races) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Other (SPECIFY) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Other (SPECIFY) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Other (SPECIFY) | <input type="checkbox"/> Other (SPECIFY) |

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

- | | |
|--|--|
| <input type="checkbox"/> 2 Hessian Fly (<i>Mayetiola destructor</i>) (Great Plains Race) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> 0 Stem Sawfly (<i>Cephus</i> spp.) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> 0 Cereal Leaf Beetle (<i>Oulema melanopa</i>) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> 1 Russian Aphid (<i>Diuraphis noxia</i>) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> 0 Greenbug (<i>Schizaphis graminum</i>) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> 0 Aphids | <input type="checkbox"/> Other (SPECIFY) |

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

EXHIBIT E

STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Board of Regents, University of Nebraska	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER NE97465	3. VARIETY NAME Goodstreak
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) Lincoln, NE 68583-0745	5. TELEPHONE (include area code) 402-472-7211	6. FAX (include area code) 402-472-7904
7. PVPO NUMBER		2003 00 28 1

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. ☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. national or U.S. based company? ☒ YES ☐ NO
If no, give name of country10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

☐ YES ☐ NO If no, give name of country

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (if needed, use reverse for extra space):

SEE ATTACHED

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.